

Claims

1. A programmable communicator (10) comprising a wireless communications platform for communicating via a standard wireless telecommunication network being either GSM (global system for mobile telecommunication) or GPRS (general packet radio service) or CDMA (Code division multiple access) or WCDMA (wide band CDMA) or CDMA2000 or WLAN (wireless LAN) or PDC (Personal Digital Cellular) or via a satellite telecommunications system comprising a secure wireless platform module (220) for processing telecommunication messages and phone calls, an antenna (210), a system processing module (250), a GPS module (260) comprising a baseband correlator means for processing GPS positional coordinates from data received from the antenna (270), a memory module (280) for storing a dedicated operating system and program and status data, a remote device identification list (telephone number list/IP address list), a plurality of processed information and a plurality of GPS coordinates with reference to real-time clock data generated by said system processing module (250), said programmable communicator (10) further comprising a message generation means (240) (short message system, SMS, multimedia message system, MMS, enhanced message system, EMS), a rechargeable battery (230), one or a plurality of interface means (400), an LED or light-emitting polymer or plasma screen display or light-emitting fibre display (310) and a call selection means (310) connected to said wireless platform module (220), a ring tone generator (330), a rechargeable battery, said programmable communicator (10) being characterised by:
- means for activating as a plug and play device said programmable communicator (10) by receiving one or a plurality of messages (SMS) from a fixed or mobile telephone or wireless LAN device comprising:
- (a) the identity module (SIM card) unique ID code (PUK) of said programmable communicator (10) and a customer preference PIN,

(b) a mobile telephone number or subscription identity to which subscription said programmable communicator (10) is to be linked,

(c) the mobile or fixed telephone number or IP address of
5 the authorised programmer, and

said activation means further sending an acknowledgement message (SMS) to the sender, closing the activation phase and putting said programmable communicator (10) in a programming mode.

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2. A programmable communicator (10) as disclosed in claim 1 wherein said programmable communicator (10) further comprising means for authenticating a sender as an authorised programmer
15 wherein said means compares the telephone number or remote device identity (IP address) of said sender with said received authorised programmer telephone number or IP address in said activation phase,

said authorised programmer pre-programming said activated
20 programmable communicator (10) by downloading said remote device identity list (telephone number list/IP address list) by means of one or a plurality of messages (SMS), comprising one or a plurality of mobile telephone numbers or fixed telephone numbers or IP addresses that said programmable communicator (10) can call
25 being the same or different from one or a plurality of mobile or fixed telephone numbers or IP addresses said programmable communicator (10) is allowed to receive calls from, putting said programmable communicator in an operational mode.

30 3. A programmable communicator (10) as disclosed in claim 2 wherein said programmable communicator (10) is embedded in a rugged protection case in the form of a sports icon wherein said rugged protection case is in the form and shape of a climber's carabiner safety clip comprising an extended fixed arm (15), a
35 movable arm (20) for moving around a spring loaded axis joint (80) to ensure said moveable arm (20) be closed in the rest

position providing an empty void (60) with the arms closed, a heat sensor (300) and/or a lock sensor (290), a compartment to enclose said wireless communications platform, a secure locking mechanism (30) comprising a moveable sleeve to lock and unlock said moveable arm (20), a speakerphone (40) for voice and audio communication, a display means (50) indicating the status of said programmable communicator (10) by means of different colours wherein said statuses being active mode and/or idle mode and/or out of base-station coverage area, a call button (70) for calling a preset number and receiving an authorised caller's call, a battery recharge port (110) and a telecommunications port (120) for connecting an audio headset and/or a computer for optionally changing said one or a plurality of mobile or fixed telephone numbers said programmable communicator (10) can call or be allowed to receive calls from.

4. A programmable communicator (10) as disclosed in claim 3 wherein

the surface of said programmable communicator further comprising a ring display (light emitting fibre) (55) and two call buttons (75), and

said ring display (55) comprising a plurality of rings for generating one or a plurality of different colour lights according to said statuses of said programmable communicator (10).

5. A programmable communicator (10) as disclosed in claim 2 wherein said programmable communicator (10) is embedded in a rugged protection case in the form of a sports icon wherein said rugged protection case is in the form and shape of a climber's carabiner safety clip comprising an extended fixed arm, a movable arm for moving around a spring loaded axis joint to ensure said moveable arm be closed in the rest position providing an empty void with the arms closed, a heat sensor (300) and/or a lock sensor (290), a compartment to enclose said wireless communication platform, a secure locking mechanism comprising a

moveable sleeve to lock and unlock said moveable arm, a speakerphone (40) for voice and audio communication, an LED display indicating the status of said programmable communicator (10) by means of different colours wherein said statuses being
5 active mode and/or idle mode and/or out of base-station coverage area, two call buttons (75) for calling a preset number and receiving an authorised caller's call, a battery recharge port and a telecommunications port for connecting an audio headset and/or a computer for optionally changing said one or a plurality
10 of mobile or fixed telephone numbers said programmable communicator (10) can call or be allowed to receive calls from.

6. A programmable communicator (10) as disclosed in claims 3 to 5 wherein

15 said moveable arm (20) makes contact with a sensing element (90), and

said sensing element (90) is supervised by a processing function in order to enable or disable said locking mechanism (30), wherein said processing function being programmed and/or
20 remotely controlled by telecommunications messages (SMS), and said programmable communicator (10) further comprising means for sending an alarm comprising the location and date and time when said locking mechanism is opened by a non-authorised person or accident event.

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7. A programmable communicator (10) as disclosed in claim 6 further comprising a display and call selection means (310) and two scroll buttons (315) for scrolling through said stored list of authorised remote device identity numbers (telephone numbers)
30 that said programmable communicator (10) can call, wherein the number the user wishes to dial is selected by scrolling through said list of authorised numbers and pressing the calling button (75) when the number is shown in said display.

35 8. A programmable communicator (10) as disclosed in claim 2 wherein

said programmable communicator (10) is designed as a plug-in secure module having the shape of a plug-in games module wherein said plug-in secure module docks with a games console by slotting into an existing port in said games console for upgrading said games console, and

said plug-in secure module draws power from the power supply of said games console, and

said programmable communicator (10) comprising an I/O (input/output) port for controlling the display of said games console, wherein said programmable communicator (10) displaying a subscriber number on said games console display (610) and wherein a user scrolls through said list of authorised remote device (telephone) numbers by means of the game console rocker (600) and activates or deactivates calls by means of buttons A and B, and

said game console further comprising a loudspeaker (635), an in-built microphone, and a headset port (630) for receiving a phone call on said game console.

9. A programmable communicator (10) as disclosed in claim 8 further comprising:

an I/O port, and/or an infrared light port (640) through which one said programmable communicator (10) communicates with a second said programmable communicator (10) comprising the same infrared light port for sending an emoticon image and causes said second of said programmable communicators(10) to generate instantly said sent emoticon image on said games console display (310).

10. A programmable communicator (10) as disclosed in claim 2 wherein

said programmable communicator (10) is embedded in a rigid or flexible element (770) being part of the surface of a casing or article of clothing or device or machine to which said communicator is to be attached, and

said programmable communicator (10) further comprising a display and call selection means (310) and two scroll buttons (315), and wherein

5 said programmable communicator (10) being attached to said rigid or flexible element (770) by two or more press-in clips (710), and/or comprising a water resistant cover (740), and

10 said rigid or flexible element (770) being chemically bonded to the fabric (790) or said rigid or flexible element (770) being attached to a backing plate (720) by means of protruding pins or magnetic elements to lock said programmable communicator (10) to an article of clothing wherein said fabric is sandwiched between said rigid or flexible element (770) and said backing plate (720), and/or

15 said programmable communicator (10) comprising a small speakerphone (780) and/or a headset port (795) to plug in a headset for use for audio-voice communication, and/or an infrared send/receive port (750) and/or

20 said programmable communicator (10) further comprising an infrared communication port for transmitting one or a plurality of messages to a wrist-worn IR command pad or to a second similar programmable communicator (10).

11. A programmable communicator (10) as disclosed in claim 8 or 10 further comprising

25 means for storing a library of a plurality of stationary or animated emoticon images including a corresponding alphanumeric code for scrolling through said emoticon images on said display (310) and selecting each of said stationary or animated emoticon images wherein one or more of said plurality of emoticon images of said library being downloaded from the same or from different Internet web pages by one or a plurality of MMS or EMS messages or via GPRS, wherein

30 said library being changed partially or totally for allowing two or more players to play an interactive game facing each other wherein said programmable communicator (10) sending only the changed features in an emoticon displayed in said interactive

game display when a move is made for keeping all of playing game consoles synchronised through said I/O port or infrared light port or by a radiotelephone communication, and further comprising

means to display commands controlling the movement and/or
5 colour and/or hue and/or size and/or screen location of each stationary or animated emoticon element in order to personalise said emoticon display and wherein

an incoming call being automatically linked to said library in order to display one of said stationary or animated emoticon
10 elements in real time according to said permitted callers list of authorised remote device identities (telephone numbers/IP addresses).

12. A programmable communicator (10) as disclosed in claim 6 or
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being attached to the clothing of a child for him/her to enjoy playing with said programmable communicator (10) and for supervising adults to track the location of said child, or

being attached to a sports person or a field agent to track
20 his location and state, or

being attached to a moveable vehicle in order to protect said moveable vehicle from being stolen or damaged wherein said programmable communicator sending an alarm to a predetermined telephone number stored in said list, or

25 being attached to a container for monitoring the location and state of said container, or

being locked to the external casing surrounding an inventory article or to an adapted attachment mount for remotely tracking said inventory.

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13. A programmable communicator (10) as disclosed in claim 2 further being embedded as an embedded communications platform of a device or machine such as a parking meter or vending machine wherein said display (310) and/or a loudspeaker/speakerphone
35 connected via an interface (400) forms part of the outer casing of the device such that moving and/or still images comprising

video and or emoticon images and/or audio files comprising music or news broadcasts or horoscopes (MP3 files) may be downloaded from one or a plurality of web pages or sent by MMS or EMS and played on the device such that images can be shown on the display
5 (310) and audio files can be heard via the loudspeaker/speakerphone.

14. A programmable communicator (10) as disclosed in claim 13 forming part of a device or machine such as a parking meter or
10 vending machine further comprising the capability to generate sounds and/or images in accordance with the operation of the said machine such that music is played via the loudspeaker/speakerphone and/or images are generated on the display when a parking ticket is purchased from the said parking
15 meter or when a drink or a snack or other commodity is purchased from the said vending machine.

15. A method for operating a programmable communicator (10) comprising a wireless communications platform for communicating
20 via a standard wireless telecommunication network being either GSM (global system for mobile telecommunication) or GPRS (general packet radio service) or CDMA (Code division multiple access) or WCDMA (wide band CDMA) or CDMA2000 or WLAN (wireless LAN) or PDC (Personal Digital Cellular) or via a satellite telecommunications
25 system comprising a secure wireless platform module (220) for processing telecommunication messages and phone calls, an antenna (210), a system processing module (250), a GPS module (260) comprising a baseband correlator means for processing GPS positional coordinates from data received from the antenna (270),
30 a memory module (280) for storing a dedicated operating system and program and status data, a remote device identification list (telephone number list/IP address list), a plurality of processed information and a plurality of GPS coordinates with reference to real-time clock data generated by said system processing module
35 (250), said programmable communicator (10) further comprising a message generation means (240) (short message system, SMS,

multimedia message system, MMS, enhanced message system, EMS), a rechargeable battery (230), one or a plurality of interface means (400), an LED or light-emitting polymer or plasma display or light-emitting fibre display (310) a call selection means (310) connected to said wireless platform module (220), a ring tone generator (330), a rechargeable battery, said method for operating said programmable communicator (10) being characterised by the steps of:

activating said programmable communicator as a plug and play device (10) by receiving one or a plurality of messages (SMS) from a fixed or mobile telephone or WLAN device comprising:

(a) the identity module (SIM card) unique ID code (PUK) of said programmable communicator (10) and a customer preference PIN,

(b) a mobile telephone number or subscription identity to which subscription said programmable communicator (10) is to be linked,

(c) the mobile or fixed telephone number of the authorised programmer, and

further sending an acknowledgement message (SMS) to the sender, closing the activation phase and putting said programmable communicator (10) in a programming mode.

16. A method for operating a programmable communicator (10) as disclosed in claim 15 further comprising the steps of:

authenticating a sender as an authorised programmer comprising the step of comparing the remote device identity (telephone number/IP address) of said sender with said received authorised programmer remote device identity (telephone number/IP address) in said activation phase, and

pre-programming said activated programmable communicator (10) by downloading said permitted callers list (telephone number list) by means of one or a plurality of messages (SMS), comprising one or a plurality of mobile or fixed telephone numbers or IP addresses that said programmable communicator (10) can call and one or a plurality of mobile and/or fixed telephone

numbers and/or IP addresses that said programmable communicator (10) is allowed to receive calls from, putting said programmable communicator in an operational mode.

5 17. A method for operating a programmable communicator (10) as disclosed in claim 16 further comprising the steps of:

locking said programmable communicator (10) to a person being a child or an adult or an elderly person or to a moveable object being a bicycle or a container or a freight towing or a
10 wagon wherein said programmable communicator being embedded in a rugged protection case in the form and shape of a carabiner safety clip, and

automatically checking the state of said carabiner safety clip, and

15 sending an alarm to one or more prioritised telephone numbers stored in said list, said alarm comprising the location of said carabiner safety clip, wherein said alarm being provoked by a non-authorized opening of said carabiner clip or by said person when in danger.

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18. A method for operating a programmable communicator (10) as disclosed in claim 17 wherein said step of checking the state of said carabiner clip comprising the steps of:

periodically sending a status data including said location
25 of said carabiner safety clip wherein said programmable communicator (10) receiving first one or a plurality of messages (SMS) comprising a period and a command to be executed by said system processing module (250), or

sending when requested by an authorized person, said status
30 data, to one or more prioritised telephone numbers from said list, wherein

said status data comprising the locking state of said carabiner safety clip and/or the status of said battery, and/or a series of locations and associated dates and times and/or the
35 history of said inventory and/or routing data and/or evaluated

time to destination wherein said status data are stored in said memory module (280).

19. A method for operating a programmable communicator (10) as disclosed in claim 16 further comprising the steps of:

displaying a stationary or animated emoticon image from a library stored in said memory module (280) when said programmable communicator (10) receives a call in order to personalise said incoming call, wherein one or more of said plurality of emoticon images of said library being downloaded from the same or from different Internet web pages or by one or a plurality of MMS or EMS messages or via GPRS, wherein said programmable communicator (10) is designed as a plug-in secure module having the shape of a plug-in games module docking with a games console by slotting into an existing port of said games console for upgrading said games console and comprising an input/output port for controlling the display of said games console, and

personalising said emoticon display by controlling the movement and/or colour and/or hue and/or size and/or screen location of each stationary or animated emoticon element from said library.

20. A method for operating a programmable communicator (10) as disclosed in claim 19 further comprising the step of:

changing partially or totally said library for allowing two or more players to play an interactive game facing each other wherein said programmable communicator (10) by sending only the changed features in an emoticon displayed on said interactive games console display when a move is made for keeping one or a plurality of playing games consoles synchronised wherein said console comprising an I/O port, and/or an infrared light port (640) through which one of said programmable communicator (10) communicates with a second of said programmable communicator (10) comprising the same infrared light port for sending an emoticon image and causing said second of said programmable communicator (10) to generate instantly said sent emoticon image changed

features on its display (310) through said I/O port or infrared light port or by a radiotelephone communication wherein said interactive game comprising a location characteristic.

5 21. A method for operating a programmable communicator (10) as disclosed in claim 19 or 20 further comprising the step of:

receiving a phone call on said game console wherein said games console further comprising a loudspeaker (635), an in-built microphone, and a headset port (630), and

10 displaying a telephone number from said list on said game console display (610), and

sending a phone call by scrolling through said list of authorised telephone numbers by means of the games console rocker (600) and activating or deactivating calls by means of button A

15 and B.

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